

Econ 311: Behavioral and Experimental Economics

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Markets

Motivation: Market for Tulips

- ▶ You are a merchant in 17th century Holland
- ▶ Holland is well known for producing beautiful tulip flowers
- ▶ You are absolutely sure that tulips will be very popular next year, and sell for twice this year's price
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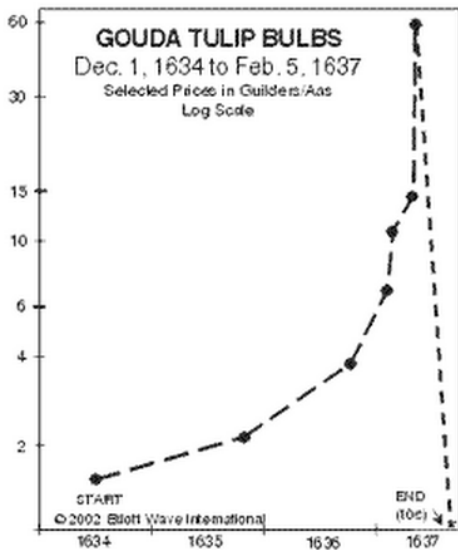
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- ▶ What will happen to the price of tulips eventually?
 - ▶ Price will increase rapidly but eventually crash once people realize price has exceeded fundamental value

Tulipmania



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- ▶ What factors might limit price bubbles?
 - ▶ Experience of traders
 - ▶ Information

A Slight Digression: Present Value

- ▶ Suppose there are two periods:
 - ▶ In period 1, you and a bunch of other people have the option buy an asset
 - ▶ In period 2, that asset pays you some amount of money V
- ▶ There is an interest rate r , meaning if you have cash m today you can put it in the bank and get out $m(1 + r)$ dollars tomorrow
- ▶ What price P makes sense as the market price for the asset?

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 - ▶ Suppose $P < \frac{V}{1+r}$
 - ▶ At this price, everyone empties their bank accounts to buy as much of the asset as they can
 - ▶ This frenzied demand would drive up price
 - ▶ Thus $P = \frac{V}{1+r}$ is the only stable price for the asset
 - ▶ This is called the *present value* of the asset

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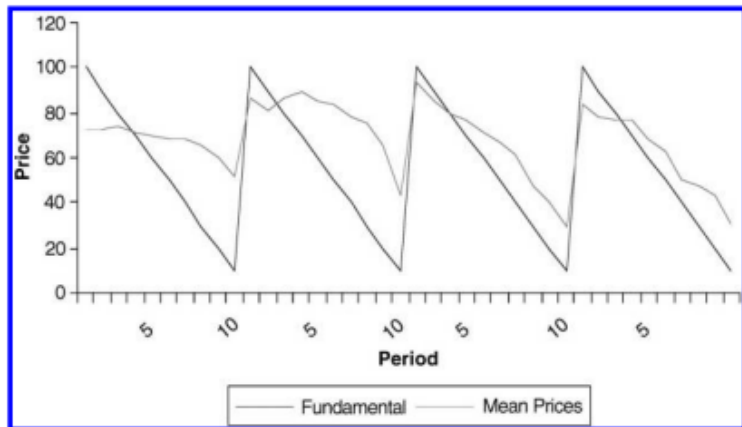
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- ▶ In fact, the price every period should be \$7.70
- ▶ What actually happened in our market?

Does Experience Alleviate Bubbles?

- ▶ In Dufwenberg et al, “Bubbles and Experience: An Experiment”, authors run experiment similar to our classroom exercise
- ▶ Two important differences:
 - ▶ 4 consecutive markets of 10 rounds each
 - ▶ In each market, risk-neutral fundamental value of asset is *decreasing* rather than constant
 - ▶ Achieve this by having large dividend and low redemption value
- ▶ Main question: does the market price track the predicted price as traders become more experienced?

Experience: Results



Does Information Alleviate Bubbles?

- ▶ M. Sutter et al, “Bubbles and Information: An Experiment”
- ▶ Total of 6 traders in market
- ▶ Three conditions:
 1. Control: no traders have any info on future dividends
 2. Info: all traders know period next dividend amount
 3. Insider:
 - ▶ Two traders know dividend for next *two* periods
 - ▶ Two traders know dividend for next period
 - ▶ Two traders are uninformed

Information

